V&V Reference Report
L2 ASCDS Version : 7.6.9

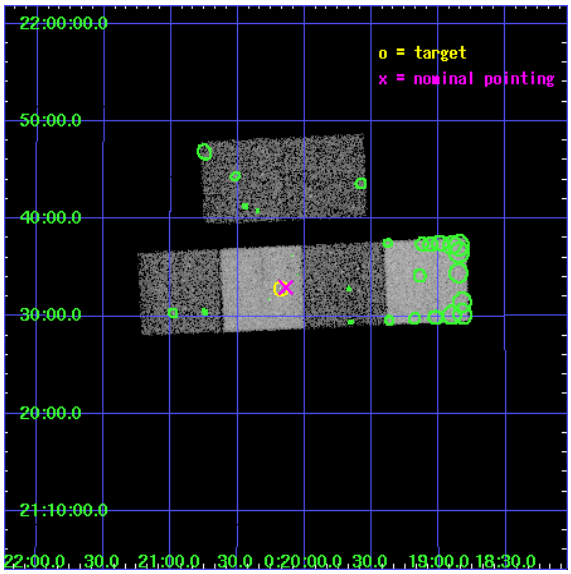
Observation 3063 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Oct 5 2006

Contents

1 Front

seq_num	700502
obs_id	3063
title	X-RAY WEAK BROAD-LINE QUASARS: ABSORPTION OR INTRINSIC X_RAY WEAKNESS ?
observer	Dr Guido Risaliti
object	HS 0017+2116
dtycycle	0
cycle	P
ra_targ	5.045
dec_targ	21.5475
ra_nom	5.0348450721411
dec_nom	21.549601989185
roll_nom	177.39441245281
revision	2
ontime	10127.958991975
livetime	9999.7126768935
ontime2	10131.199962258
ontime3	10124.718031734
ontime5	10131.199962258
ontime6	10131.199962258
ontime7	10127.958991975
ontime8	10131.199962258
l2events	93843

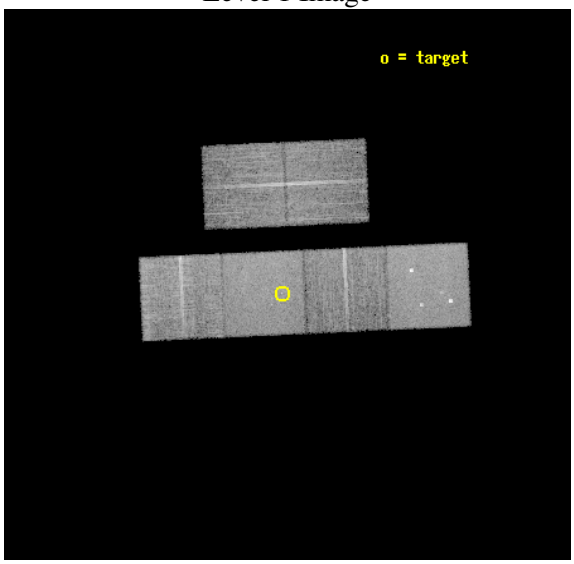


2 OBI

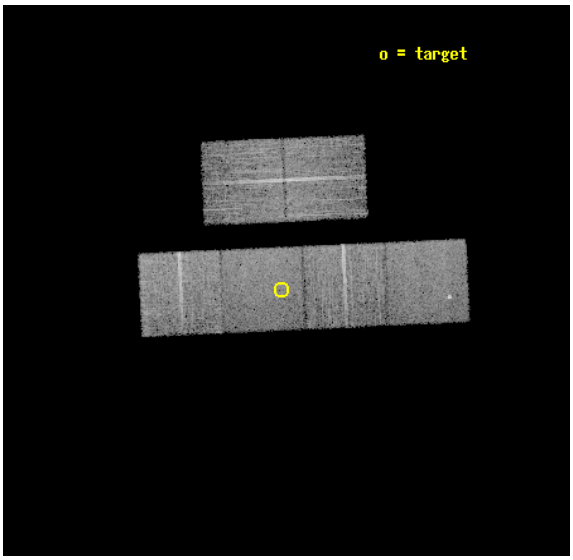
2.1 OBI

2.1.1 Images

Level 1 Image

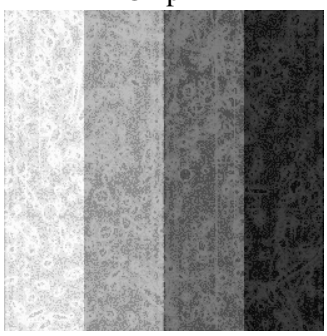


Level 1 Bad Events

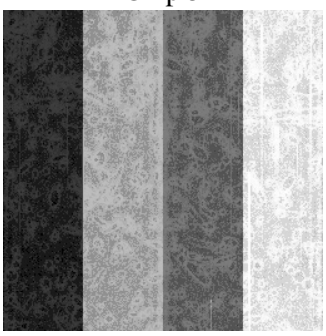


2.1.2 Bias

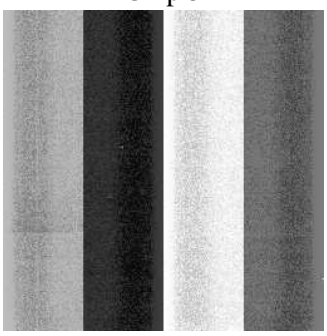
Chip 2



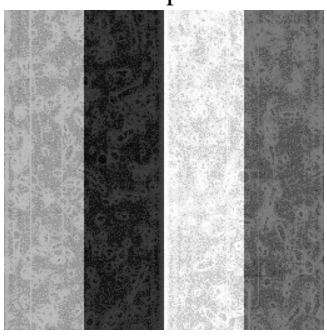
Chip 3



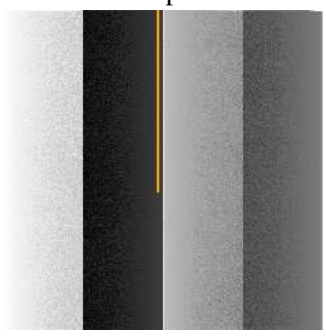
Chip 5



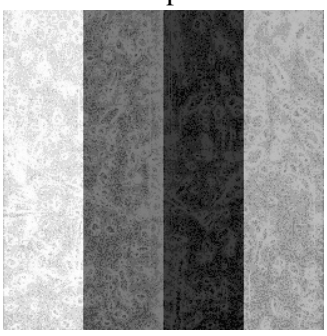
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	1
ascdsver	7.6.9
caldbver	3.2.3
date	2006-10-05T15:47:31
revision	2

sched_exp_time	10000.000000
ontime	10283.701575756
ontime2	10286.94254604
ontime3	10280.460615516
ontime5	10286.94254604
ontime6	10286.94254604
ontime7	10283.701575756
ontime8	10286.94254604
l1events	450299

2.1.4 Events

	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
level 1 events	63400	62754	92786	63954	84063	83342
rejected events	56118	55634	52287	56365	52802	65367
rejected %	88%	88%	56%	88%	62%	78%

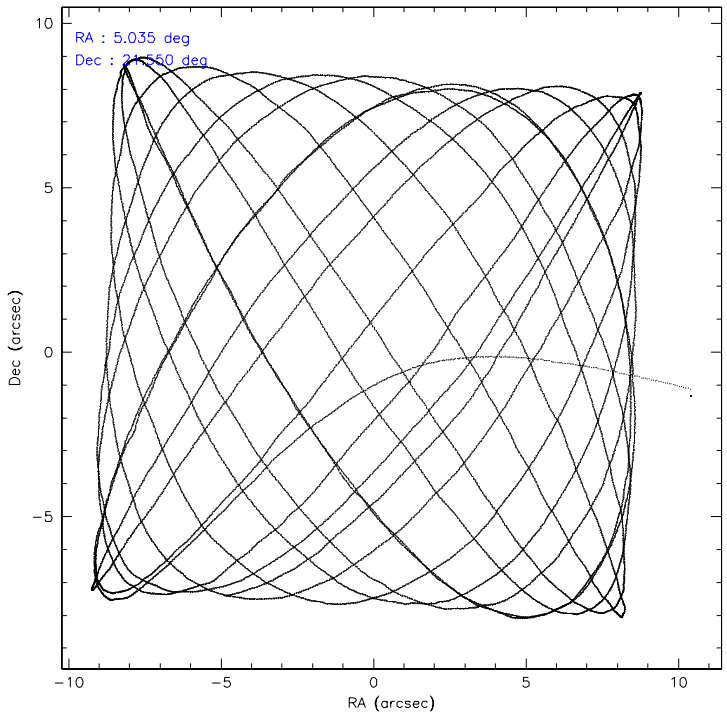
	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
grade 0 events	3305	3259	3892	3069	1976	5863
	5%	5%	4%	4%	2%	7%
grade 1 events	45	34	65	21	34	42
	0%	0%	0%	0%	0%	0%
grade 2 events	1471	1312	12537	1546	7790	3793
	2%	2%	13%	2%	9%	4%
grade 3 events	702	712	1209	771	1630	2117
	1%	1%	1%	1%	1%	2%
grade 4 events	754	660	857	709	1584	1928
	1%	1%	0%	1%	1%	2%
grade 5 events	2568	2608	4749	2879	5526	3647
	4%	4%	5%	4%	6%	4%
grade 6 events	1156	1280	22649	1603	18734	4705
	1%	2%	24%	2%	22%	5%
grade 7 events	53399	52889	46828	53356	46789	61247
	84%	84%	50%	83%	55%	73%

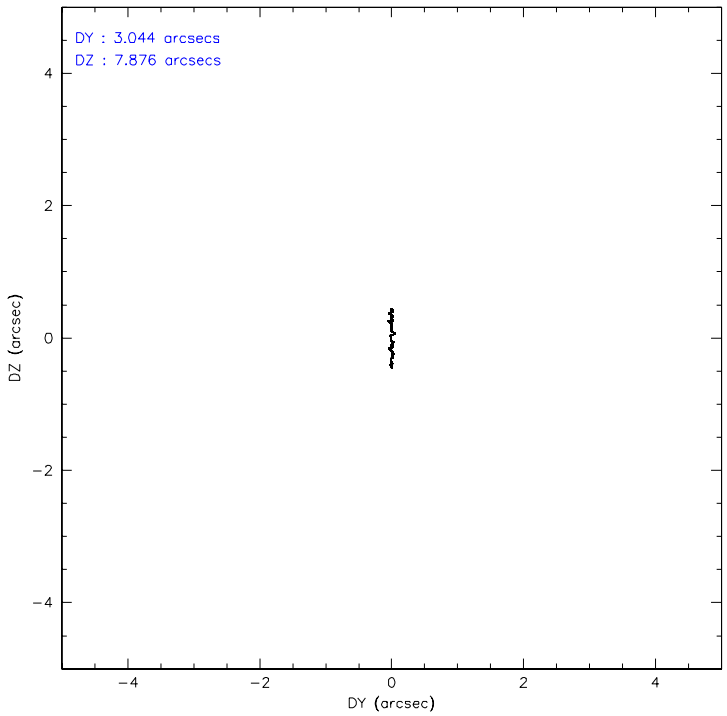
2.2 Compared Parameters

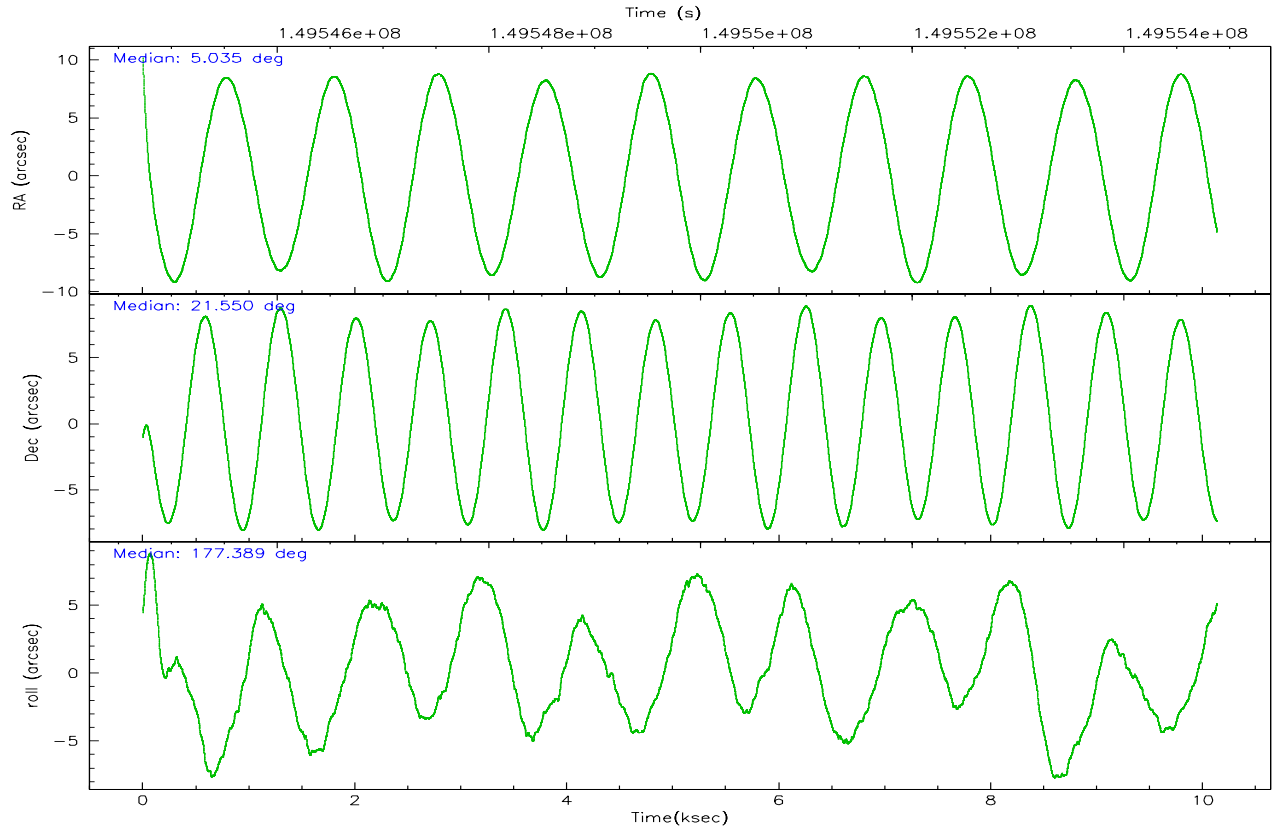
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	5.060674	5.034845072141124
Pointing Dec	21.562476	21.54960198918477
Pointing Roll	177.228295	177.3944124528068
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.001444936568705701
SIM translation stage pos (mm)	-190.132523	-190.1425803651734
SIM translation stage offset (mm)	0	0.01005778216563158
Observation start time	149544874.184000	149543753.45017
Observation start date	2002-09-27T20:13:30	2002-09-27T19:55:53
Observation end time	149554874.184000	149555912.51317
Observation end date	2002-09-27T23:00:10	2002-09-27T23:18:32
Read mode	TIMED	TIMED

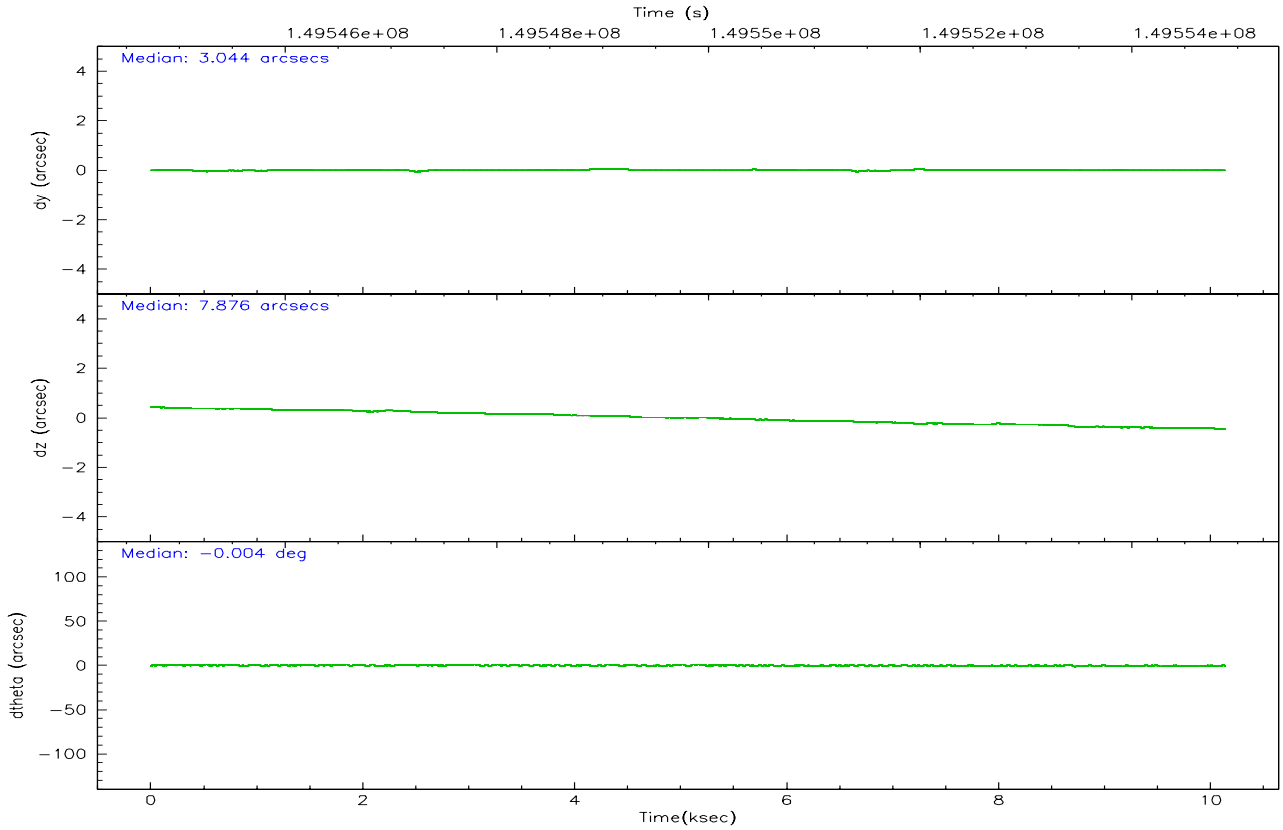
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 5.035 deg
Dec : 21.550 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−5
0
5
10


DY : 3.044 arcsecs
DZ : 7.876 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: 5.035 deg
RA (arcsec)
Median: 21.550 deg
Dec (arcsec)
Median: 177.389 deg
roll (arcsec)
Time(ksec)

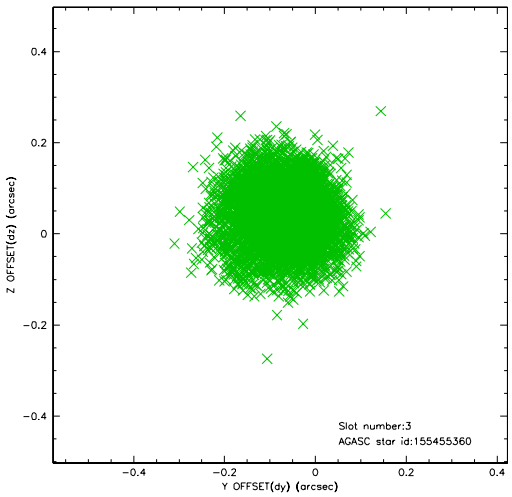

Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: 3.044 arcsecs
dy (arcsec)
Median: 7.876 arcsecs
dz (arcsec)
Median: −0.004 deg
dtheta (arcsec)
Time(ksec)

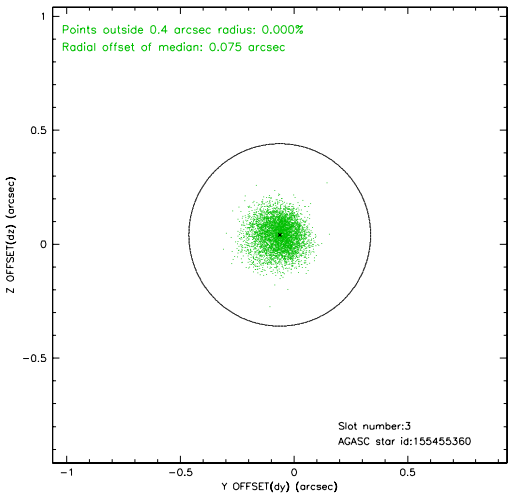
Slot Statistics

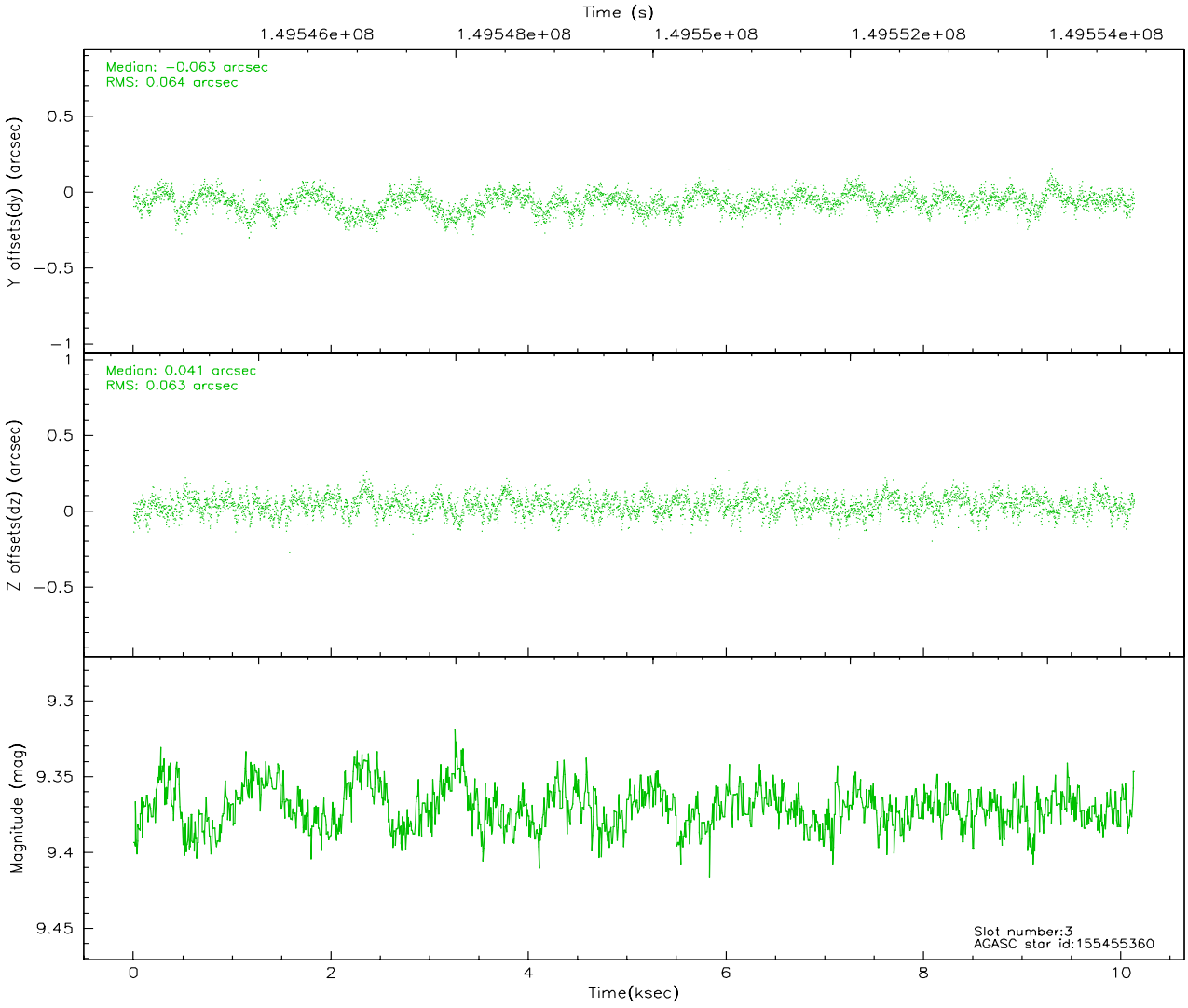
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	2472	0.002	0.018	0.007	0.012	0.000000	0.000000	-755.70	-1728.98
1	FID	ACIS-S-4	7.20	2472	-0.050	-0.006	0.005	0.009	0.000000	0.000000	2157.31	178.91
2	FID	ACIS-S-5	7.24	2472	0.016	-0.003	0.006	0.011	0.000000	0.000000	-1807.84	173.21
3	GUIDE	155455360	9.37	4944	-0.063	0.041	0.096	0.155	5.717906	22.177549	-2080.38	-2321.88
4	GUIDE	155321768	8.94	4943	0.023	-0.025	0.069	0.114	4.613794	21.477628	1480.81	375.64
5	GUIDE	155457512	9.08	4944	-0.058	-0.042	0.081	0.137	5.391079	21.239451	-1162.64	1107.47
6	GUIDE	155331936	9.30	4940	0.086	-0.070	0.090	0.148	5.163761	21.833166	-296.56	-989.41
7	GUIDE	155320904	9.65	4924	0.028	0.096	0.113	0.292	4.856782	21.638106	695.39	-238.83

2.4 Star Slots

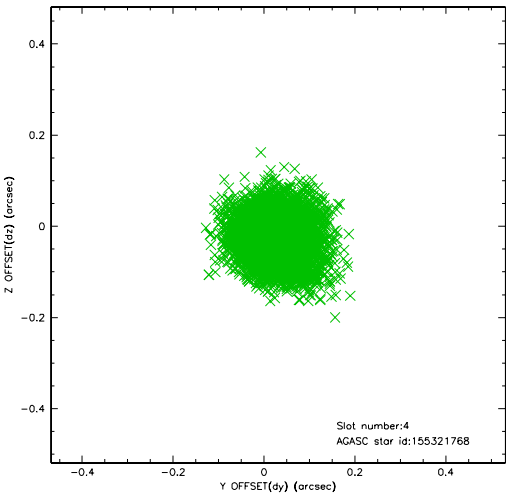
2.4.1 Slot 3

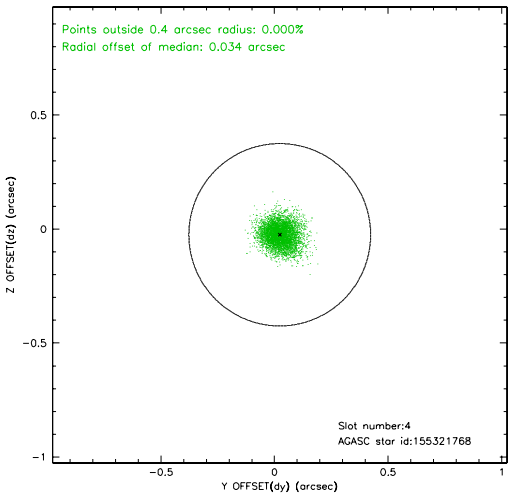


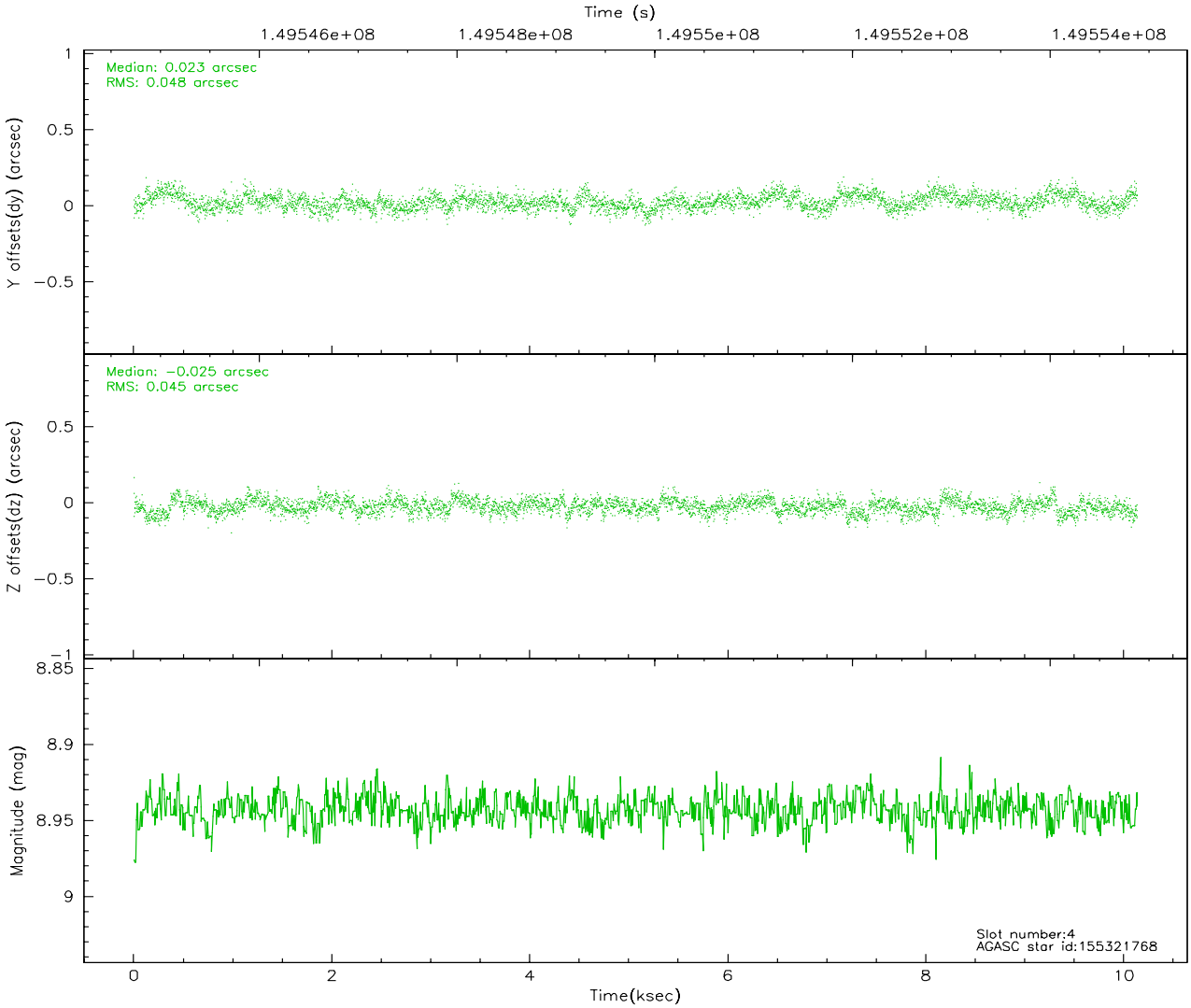




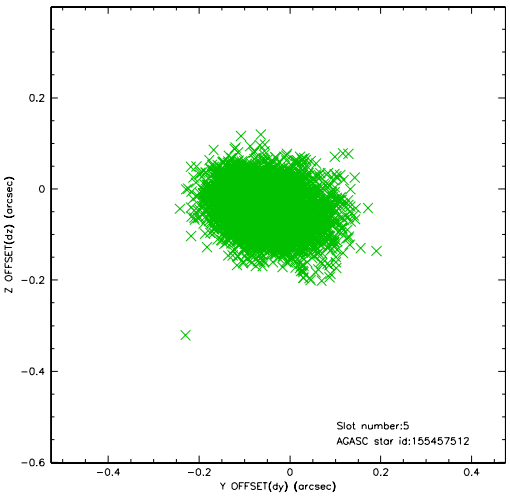
2.4.2 Slot 4

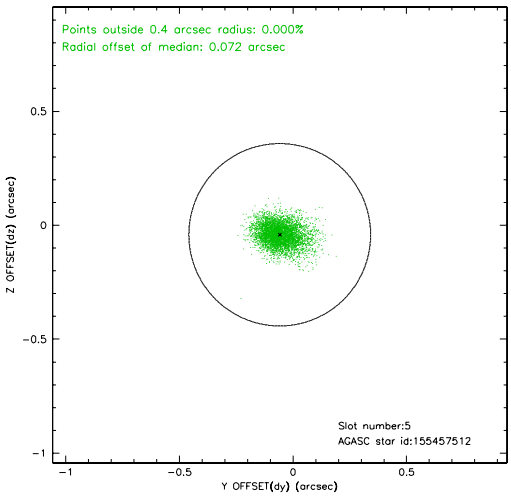

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:155321768

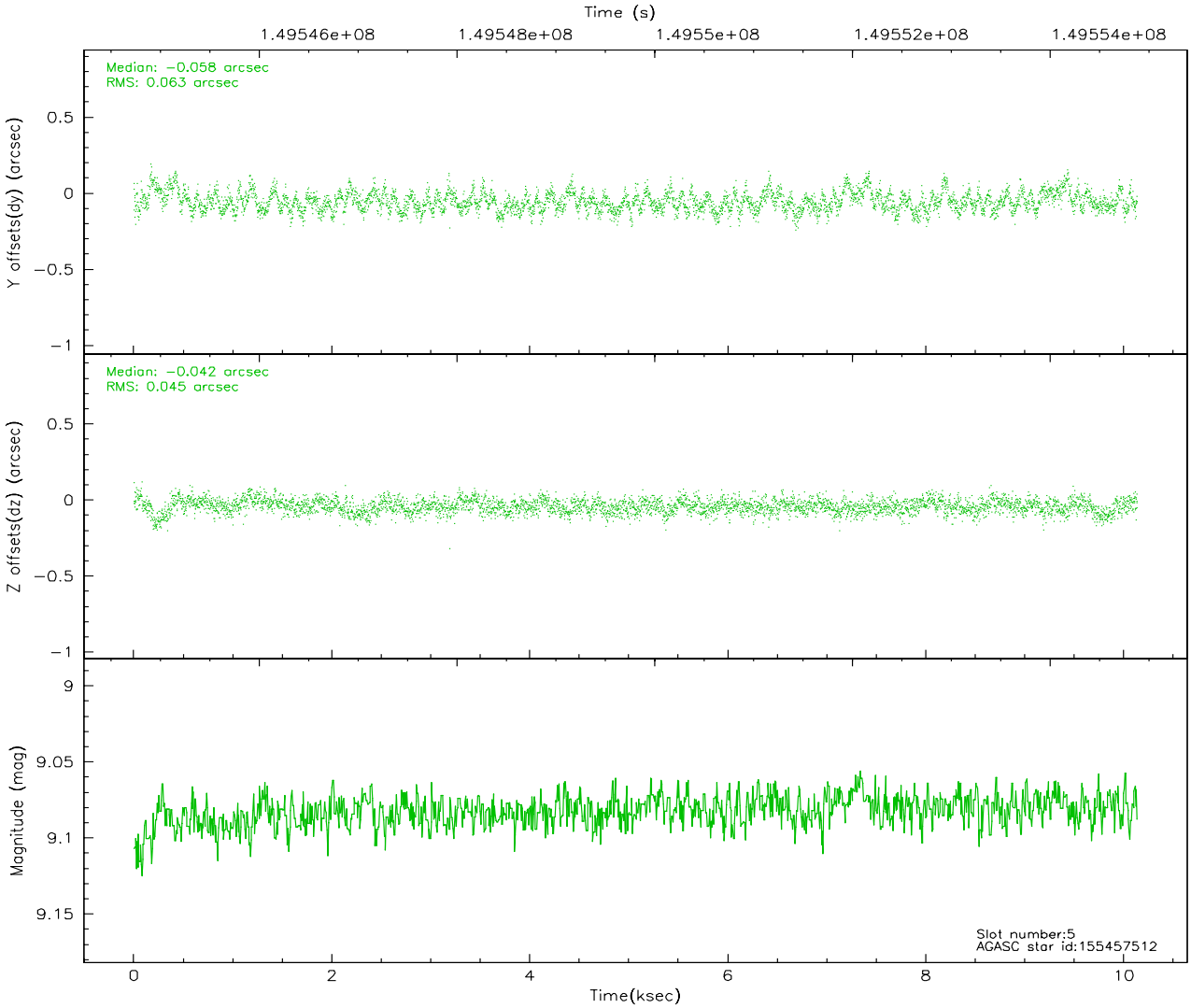

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.034 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:155321768


Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: 0.023 arcsec
RMS: 0.048 arcsec
Y offsets(dy) (arcsec)
Median: −0.025 arcsec
RMS: 0.045 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:155321768
Time(ksec)

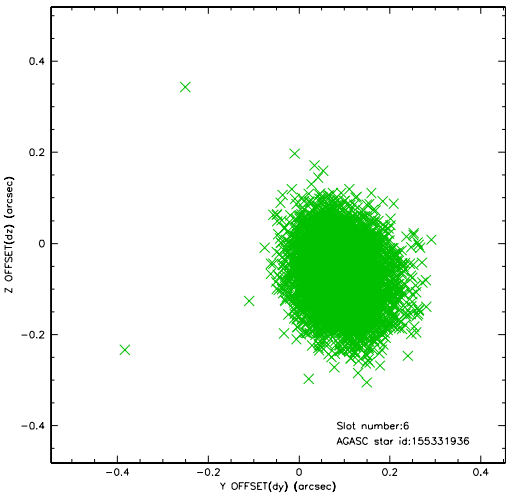
2.4.3 Slot 5

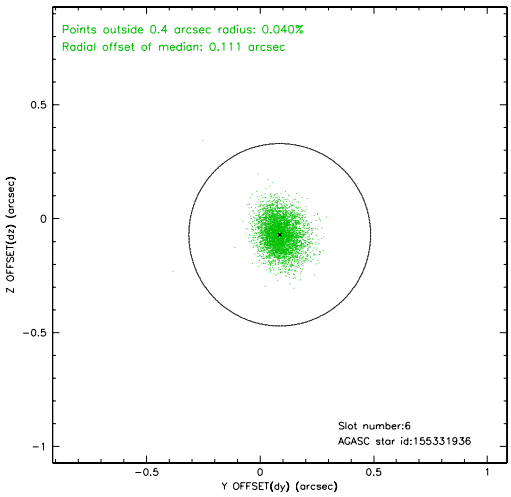

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:155457512

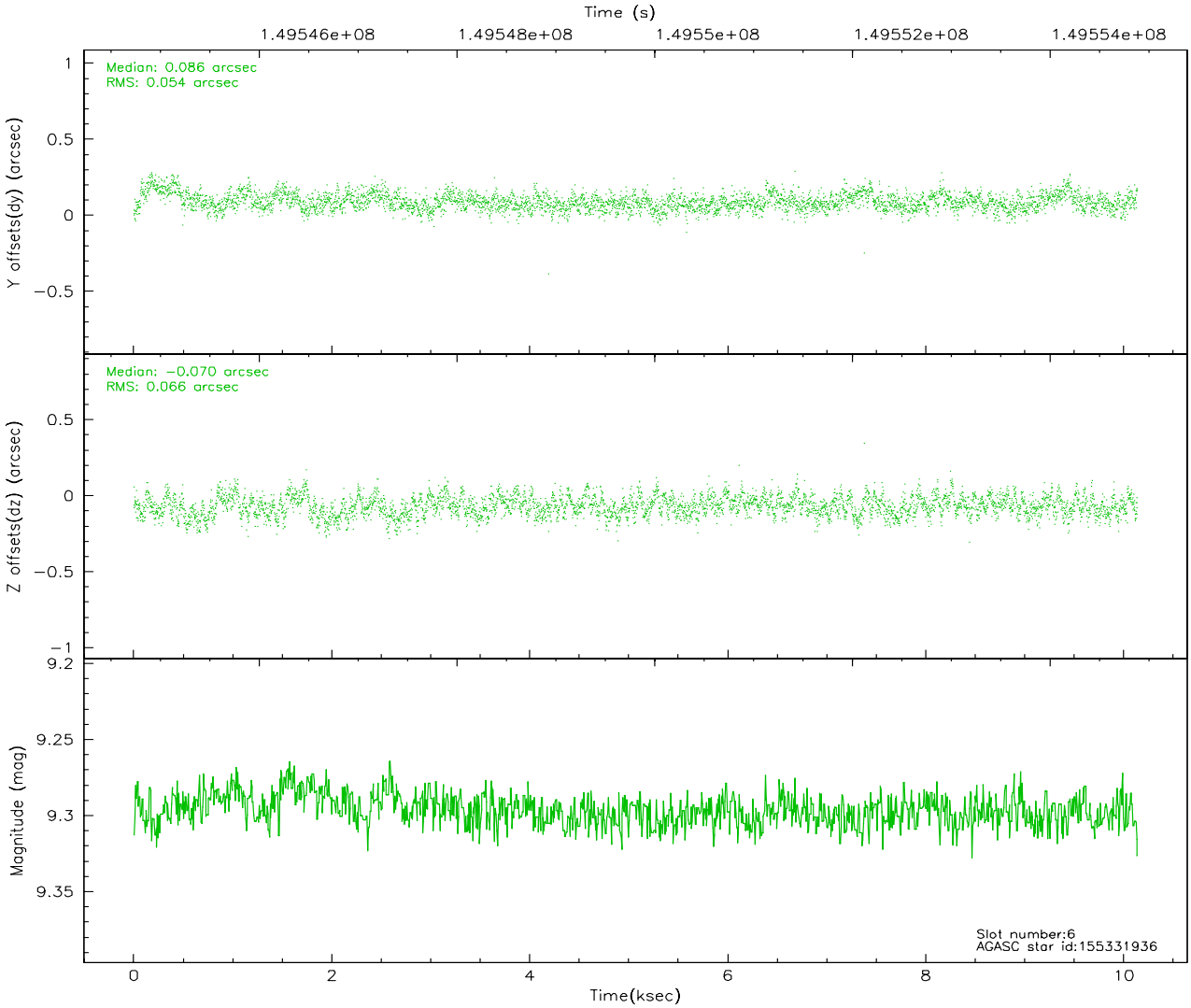

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.072 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:155457512


Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: −0.058 arcsec
RMS: 0.063 arcsec
Y offsets(dy) (arcsec)
Median: −0.042 arcsec
RMS: 0.045 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:155457512
Time(ksec)

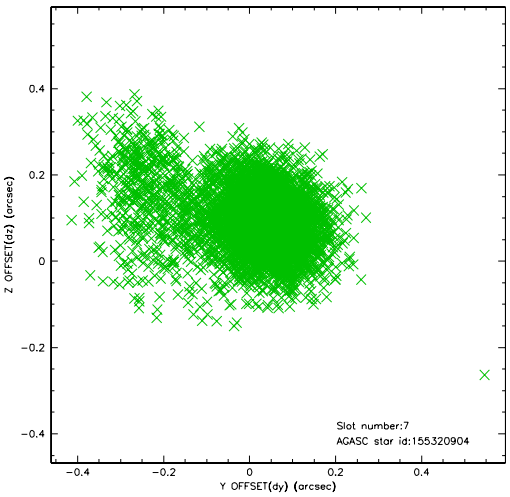
2.4.4 Slot 6

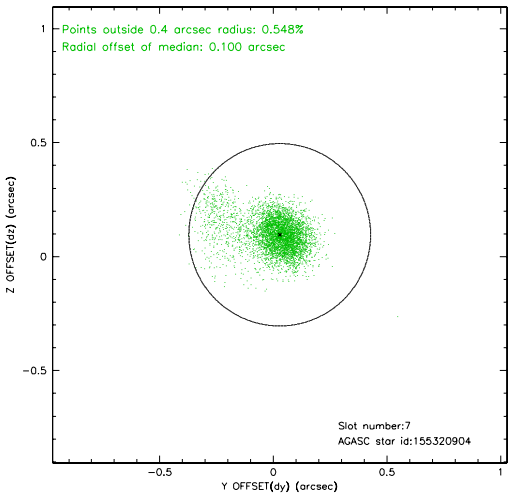

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:155331936

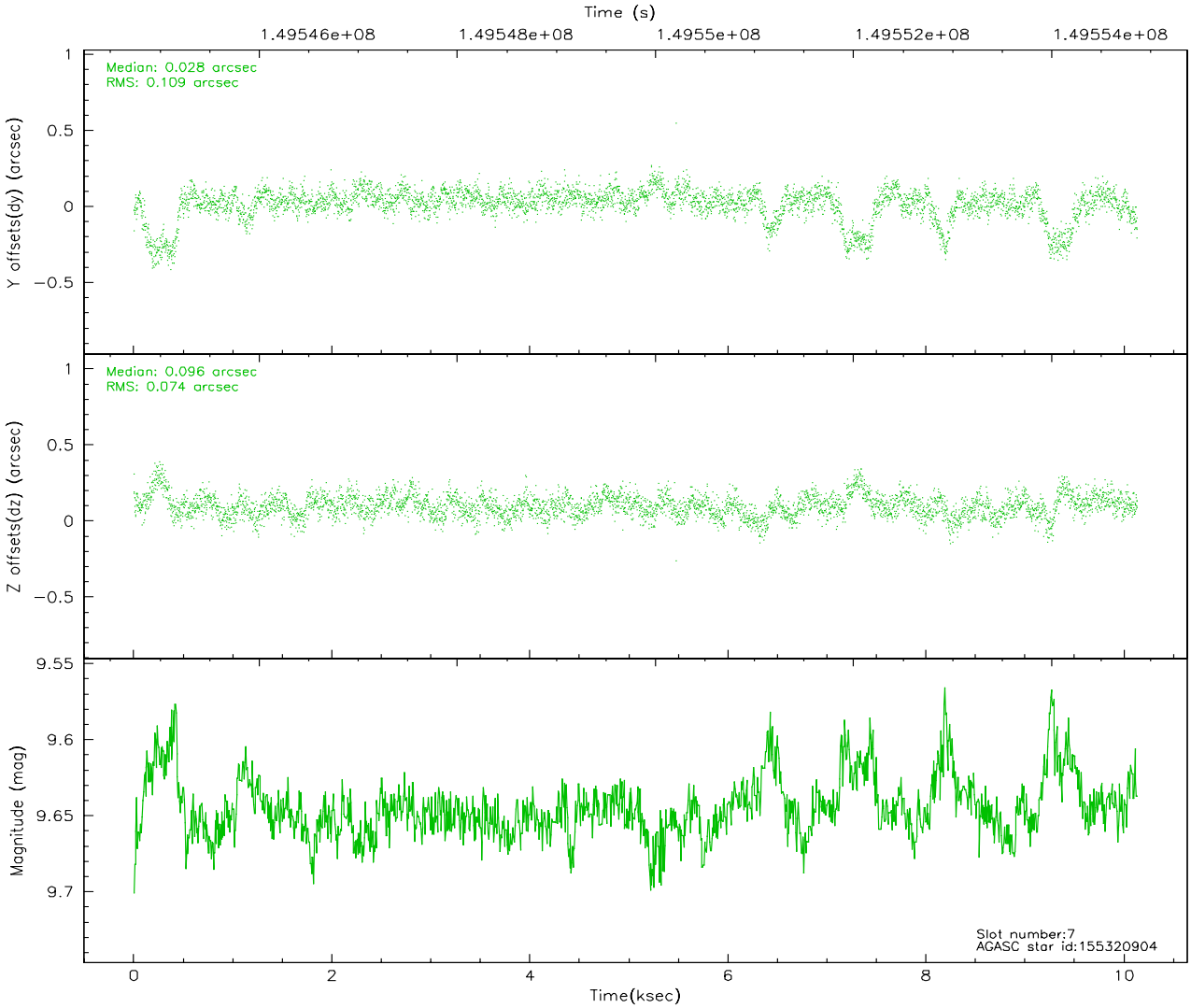

Points outside 0.4 arcsec radius: 0.040%
Radial offset of median: 0.111 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:155331936


Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: 0.086 arcsec
RMS: 0.054 arcsec
Y offsets(dy) (arcsec)
Median: −0.070 arcsec
RMS: 0.066 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:155331936
Time(ksec)

2.4.5 Slot 7

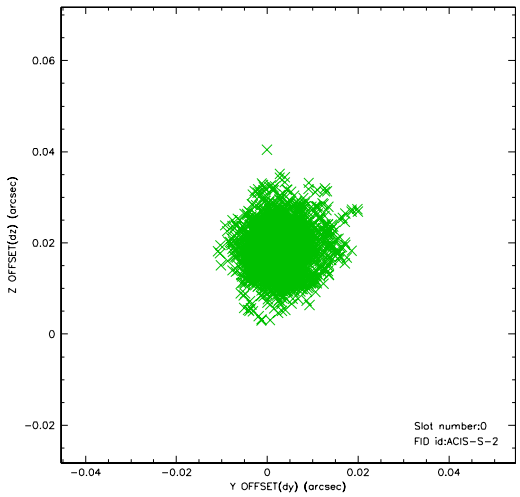

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:155320904

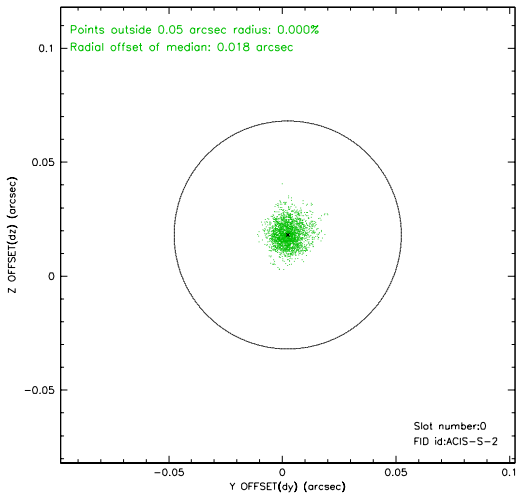

Points outside 0.4 arcsec radius: 0.548%
Radial offset of median: 0.100 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:155320904

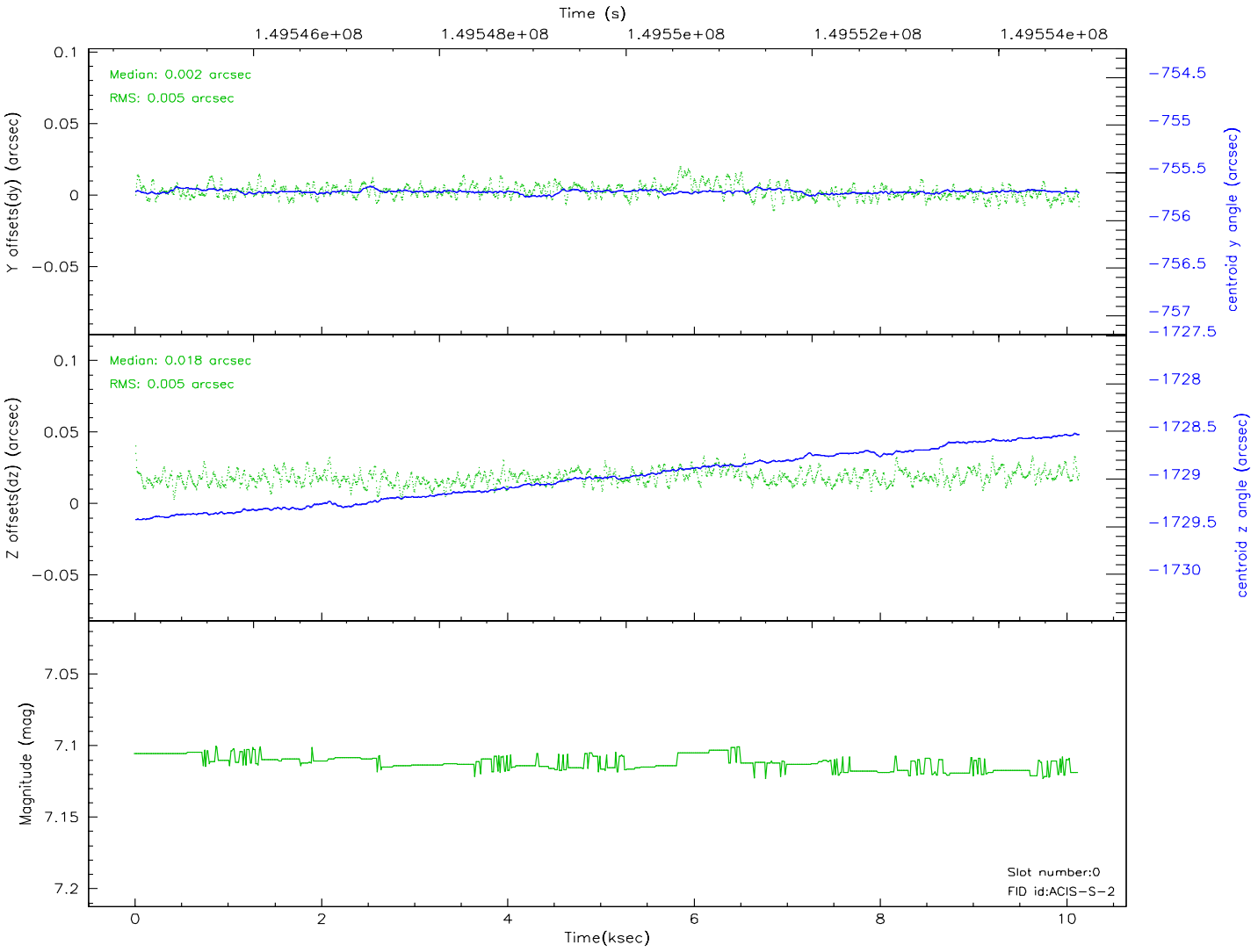

Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: 0.028 arcsec
RMS: 0.109 arcsec
Y offsets(dy) (arcsec)
Median: 0.096 arcsec
RMS: 0.074 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:155320904
Time(ksec)

2.5 FID Slots

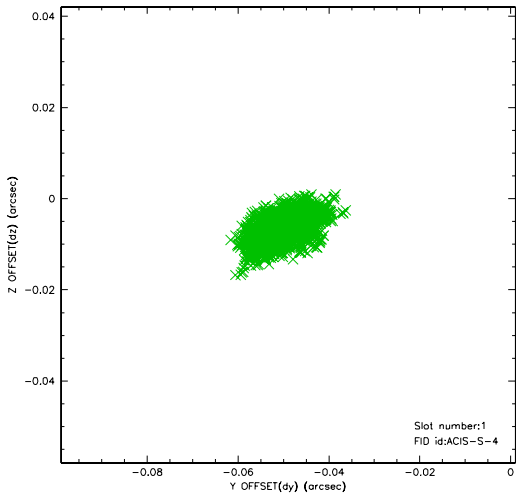
2.5.1 Slot 0

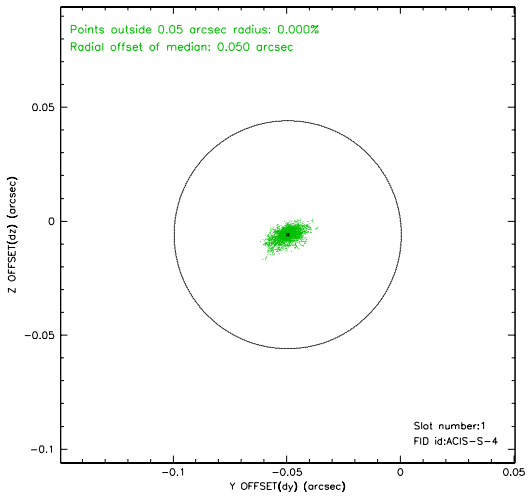


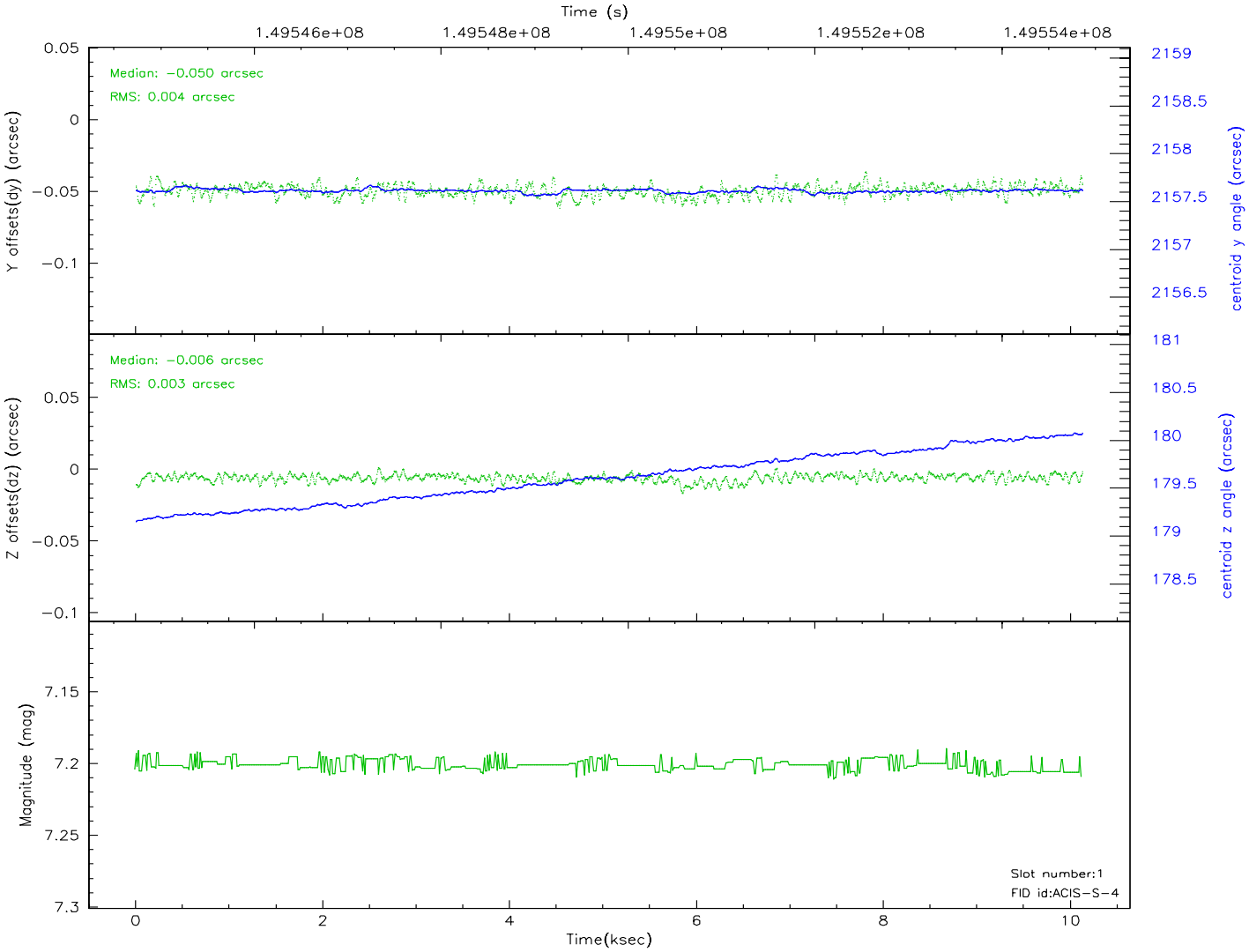




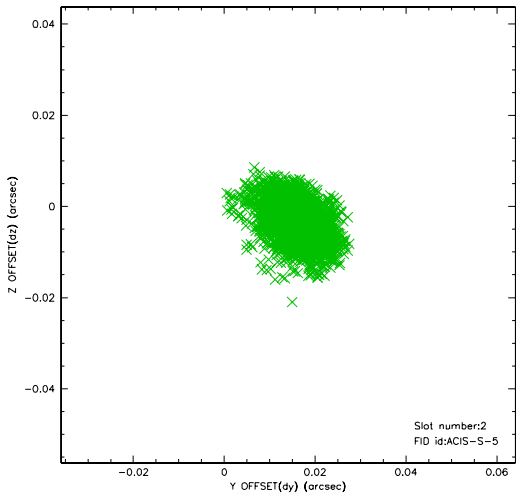
2.5.2 Slot 1

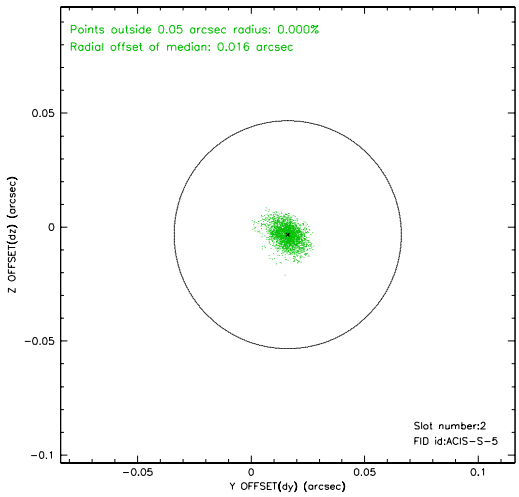

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

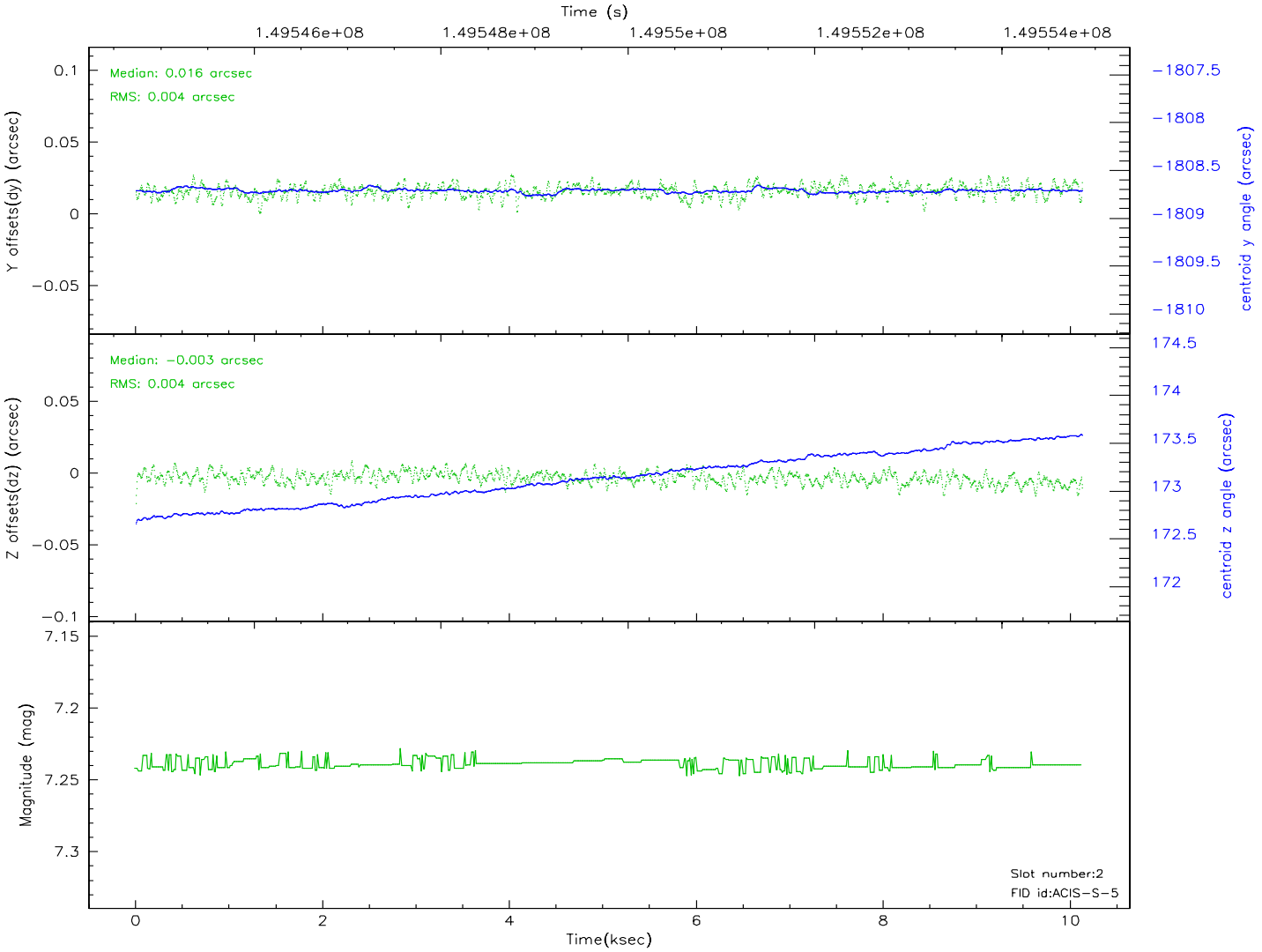

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.050 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: −0.050 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.006 arcsec
RMS: 0.003 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-4
Time(ksec)

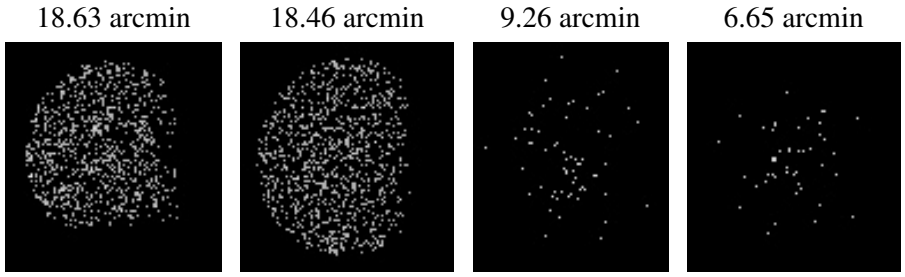
2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.016 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Time (s)
1.49546e+08
1.49548e+08
1.4955e+08
1.49552e+08
1.49554e+08
Median: 0.016 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.003 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:ACIS-S-5
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.10.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.128

A.2 Comments